

**PIEZOELECTRIC VIBRATOR AND ITS MANUFACTURE**

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EC Classification:  
Equivalents:

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**Abstract**

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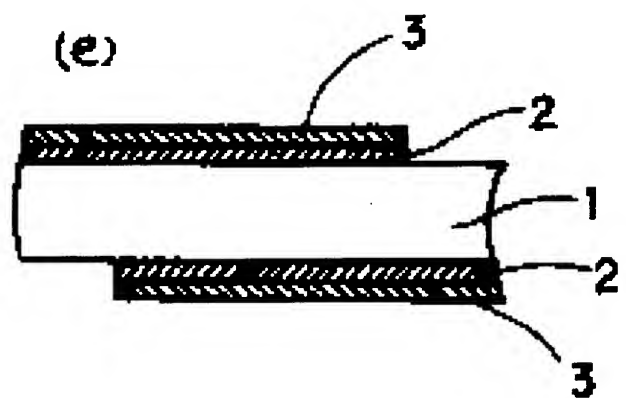
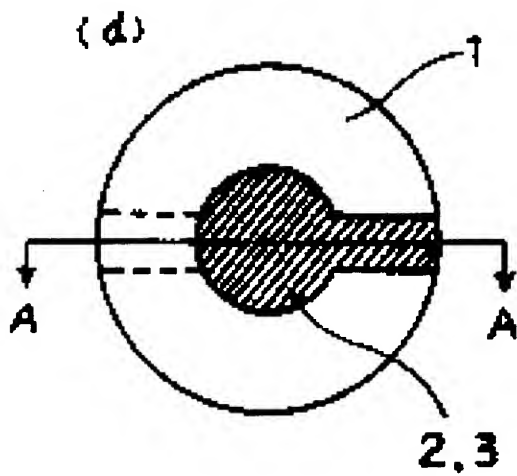
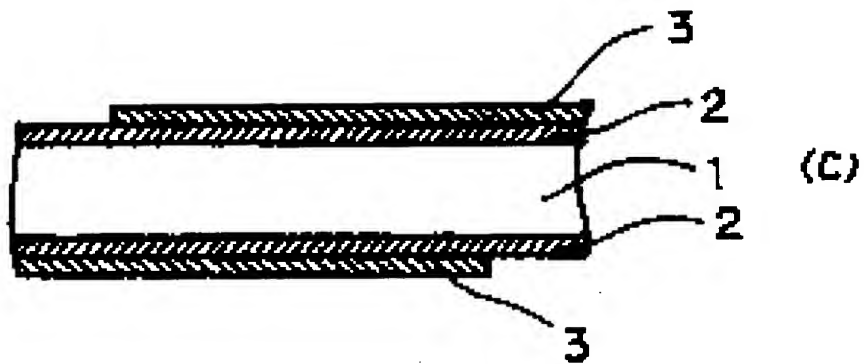
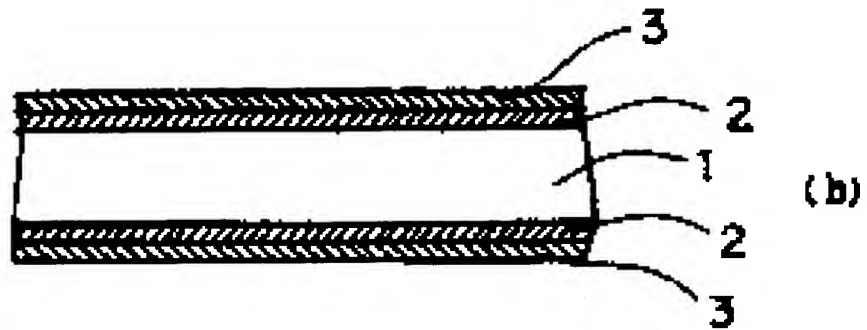
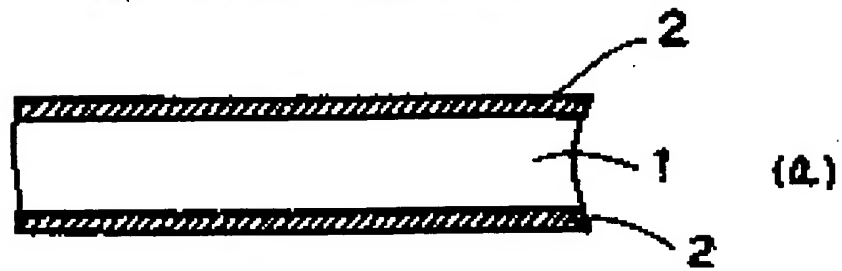
**PURPOSE:** To obtain a stable vibration even for a simple package with bad air-tightness such as a plastic package by forming a resin layer to an exciting electrode and a lead electrode so as to prevent deterioration such as oxidation of the metallic layer itself.

**CONSTITUTION:** The metallic layer 2 being the exciting electrode and the lead electrode is vapor-deposited over nearly all front face of the major surface of the AT-cut crystal vibrating board 1. After polyimide resin layer 3 having nature of photosensitivity is applied uniformly to the surface of the metallic layer 2, the part is covered with a mask so as to prevent photosensing to the electrode pattern part. The electrode pattern is the exciting electrode and the lead electrode. The piezoelectric vibrator subject to photosensing is immersed to a solvent so as to dissolve the photo-sensitized part of the polyimide resin layer 3. As a result, the photo-sensitized part is removed and the metallic layer is exposed. Then the resin layer remains only for the part being the exciting electrode and lead electrode not subject to photo-sensitizing. In putting the crystal vibrator into a solution dissolving the metal, the resin layer 3 is used as a resist and the exposed part of the metallic layer 2 is solved. The crystal oscillator formed in this way shows the state that the polyimide resin layer 3 is placed on the metallic layer 2.

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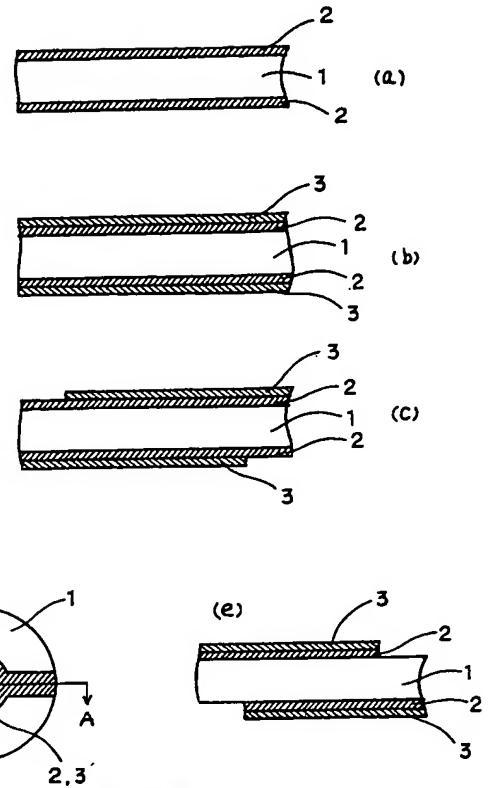


けた状態を示す正面図である。

- 1 .....圧電振動板
- 2 .....金属層
- 3 .....樹脂層

特許出願人 キンセキ株式会社

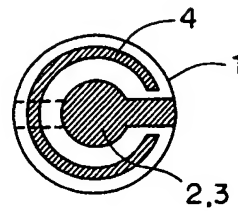
代表者 尾田 武彦



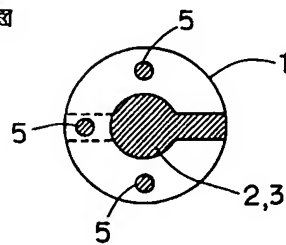
第 1 図

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第 2 図



第 3 図



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